

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022580**Date Inspected:** 13-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 12AE (U-Rib to U-Rib)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the U-Rib to U-Rib at the transverse splice between Panel Points (PP) 112 and PP 112.5 for Segment 12AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00648 dated April 13, 2011.

The bolt sizes used were M22 x 65 RC Lot # DHGM220117 and the final torque value established was 327 N-m.

The bolt sizes used were M22 x 80 RC Lot # DHGM220131 and the final torque value established was 380 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Note: U-Rib located at 15th, 18th, and 23rd (between work point E4 towards E3) and 34th and 39th (between

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work point E3 towards E2) was not offered for inspection by ZPMC QC as splice plate and bolt assembly installation is balance.

Segment 12AE to Segment 12BE (U-Rib to U-Rib)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the U-Rib to U-Rib at the transverse splice between Panel Points (PP) 112.5 and PP 113 for Segment 12AE to Segment 12BE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00648 dated April 13, 2011.

The bolt sizes used were M22 x 65 RC Lot # DHGM220112 and the final torque value established was 343 N-m.

The bolt sizes used were M22 x 80 RC Lot # DHGM220118 and the final torque value established was 467 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Note: U-Rib located at 15th (between work point E4 towards E3) and 28th, 34th, 37th and 39th (between work point E3 towards E2) was only offered for inspection, as those were not offered for Inspection on April 01, 2011 by ZPMC QC Mr. Zhang Hai Jung.

Please reference the pictures attached for more comprehensive details.

Incident Report generated at Service Platform (SP#4)

This Quality Assurance (QA) Inspector wrote an Incident Report for handling damage of Service Platform while loading on 40' Collapsible End Flat Rack Container. Please reference the Incident Report # 04-0120F4_TL-15_B278_04-13-2011_Service Platform_SP4_Impact Damage dated April 13, 2011 for further detail.

Please reference the pictures attached for more comprehensive details.

Segment 13CW (Bottom Panel to Side Panel)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as Seg3015A-009. The welder identification was 045213 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the weld connecting the Bottom Panel to Side Panel at work point W13.

Segment 13BW (Bottom Panel to Side Panel)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as Seg3014A-009. The welder identification was 045213 and observed welding in the 4G (Overhead) position using approved Welding Procedure

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Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the weld connecting the Bottom Panel to Side Panel at work point W13.

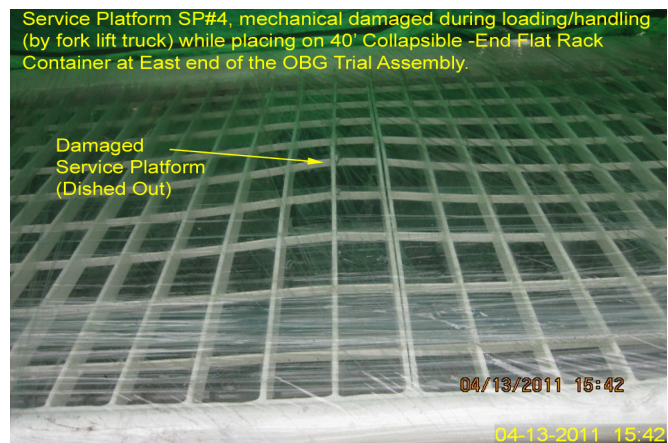
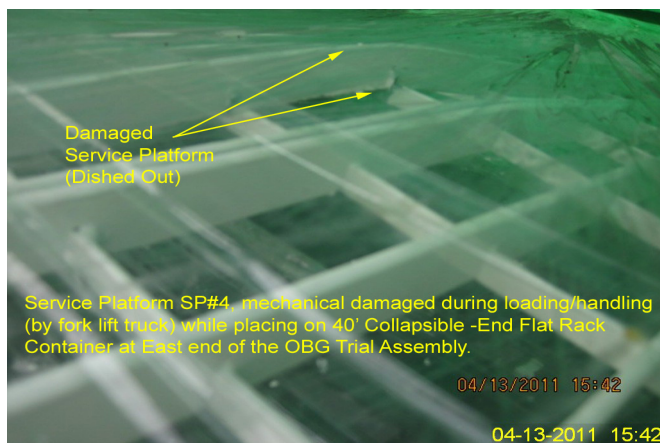
Please reference the pictures attached for more comprehensive details.

Segment 13BW (Bottom Panel to Side Panel)

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Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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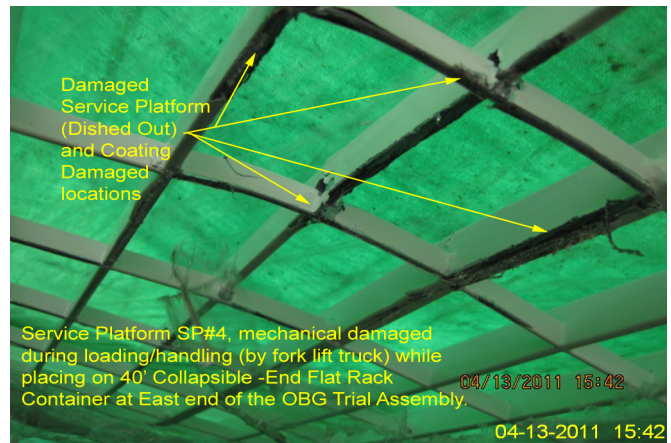
Service Platform SP#4, mechanical damaged during loading/handling (by fork lift truck) while placing on 40' Collapsible -End Flat Rack Container at East end of the OBG Trial Assembly.



Segment 13CE, Side Panel to Corner Assembly connecting weld, welding is in progress at Cross Beam side at OBG Trial Assembly.



Service Platform SP#4, mechanical damaged during loading/handling (by fork lift truck) while placing on 40' Collapsible -End Flat Rack Container at East end of the OBG Trial Assembly.



Segment 12AE to Segment 12BE at Transverse Splice U-Ribs, bolts tension verification is in progress.

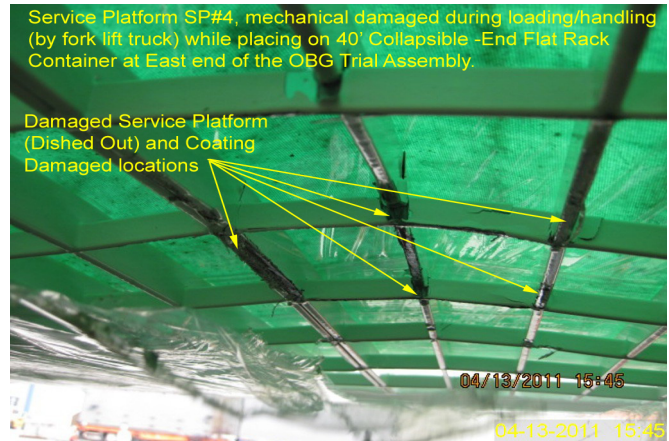


Service Platform SP#4, mechanical damaged during loading/handling (by fork lift truck) while placing on 40' Collapsible -End Flat Rack Container at East end of the OBG Trial Assembly.



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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Math,Manjunath

Quality Assurance Inspector

Reviewed By: Miller,Mark

QA Reviewer